just in front of the sacrum, where the dorsal spines reach their greatest length. From this point they rapidly fall away in both the caudal and the thoracic series. In the fourth presacral the first evidence of bifurcation appears in a slight concavity on the posterior margin of the spine. In the eighth, bifurcation is complete, the median spine being replaced by two slender and laterally directed processes. In the eleventh presacral, or posterior cervical, these lateral spines are reduced to mere rudiments.

The anterior caudal series departs less widely from that represented in Marsh's restoration. Indeed, the gradual reduction of the series posteriorly offers no reliable basis of comparison. The first caudal may be readily recognized by the semi-concave, semi-convex anterior surface of the centrum. It is also but little excavated laterally. The four succeeding caudals are more or less excavated at the base of the transverse processes. In one or two instances these fossæ descend deeply into the centra, but as they are sometimes present on one side and absent on the other they can not be regarded as constant characters. However, as Marsh has estimated the first caudal having a solid centrum, as caudal IV., it is quite probable that three vertebræ, instead of one, were missing in his specimen from the anterior end of the series. On the other hand, Dr. Osborn has probably erred on the side of estimating the number of anterior caudals as too great, if indeed the specimen described by him * as *Camarasaurus* syn. *Brontosaurus* may be regarded as belonging to this genus at all.

The centra of the anterior caudals are markedly procœlous in form, but as they diminish in size and complexity this character disappears, so that in the region of the fifteenth they become irregularly amphiplatyan. The transverse processes are rapidly reduced in size, from broad flattened plates to peg-like processes, and disappear entirely with the twelfth.

As has been pointed out by Osborn and by Hatcher with regard to *Diplodocus,* the three types of chevrons (viz., the closed arch, the open arch and the double arch types) are all found in *Brontosaurus,* ranging in the order named from the anterior end of the series backward. The presence of a short, stout, closed chevron imbedded in the matrix below the first caudal suggests that the whole series may have been chevron-bearing. As the double arch pattern is also known to occur in *Morosaurus,* the three types may be regarded as characteristic of the Sauropoda.

A complete description of this splendid specimen will be given in an early issue of the museum publications.

E. S. Riggs.

Field Columbian Museum,
January 10, 1903.

* *Bull. Amer. Mus. Nat. Hist.,* Vol. X., p. 219.

AMERICAN MUSEUM OF NATURAL HISTORY.

At the annual meeting of the Board of Trustees of the American Museum of Natural History, New York, on Monday evening, February 9, announcement was made in the President's report of many notable accessions to the collections of the Museum during the year 1902. Among the most important accessions are the following:

The Cope collection of fossil reptiles, amphibians and fishes, and the Robinson collection of archeological copper inplements, the two collections being gifts of the President.

Many rare and superb specimens have been added to the J. Pierpont Morgan collections of gems and gem minerals, and the Museum is indebted to the same donor, Mr. Morgan, for a type collection of gold and silver coins of the United States Mint.

The Duke of Loubat has presented a collection of ancient jadeite ornaments from Mexico and a valuable ethnological collection from Brazil.

The material received through the expeditions, supported by the Museum and through special gifts, has yielded gratifying results. Among the noteworthy expeditions are:

The William C. Whitney expedition in search of fossil horses.

The researches carried on in Mexico through the contributions of B. T. Babbitt Hyde and Frederick E. Hyde, Jr.

The archeological research carried on in the

Delaware valley at the expense of Dr. Frederick E. Hyde, and the field work among the vanishing tribes of the North American Indians, supported mainly through the contributions of Mrs. C. P. Huntington and Archer M. Huntington.

The Jesup North Pacific Expedition has yielded a large quantity of material.

The Eastern Asiatic Research expedition, maintained through the assistance of a friend of the Museum, has added to the collections a series of valuable and interesting objects illustrating the culture of China.

The expedition under Andrew J. Stone, who has been collecting specimens of the large fur-bearing animals in the far north, has enriched the Museum collections with many specimens of caribou, bear, deer and sheep, which will be utilized in the preparation of groups of the animals, represented with their natural environment.

A large quantity of material has been received from Commander Robert E. Peary, through the Peary Arctic Club.

The library of the Museum has received many gifts of desirable works, the most noteworthy being a gift of 287 volumes on conchology, for which the Trustees are indebted to Frederick A. Constable.

President Jesup referred to the loss to the Board in the death of Abram S. Hewitt, who had been a Trustee since 1874.

The officers for the year are:

President—Morris K. Jesup. (Twenty-third term).

First Vice-President—J. Pierpont Morgan.

Second Vice-President—Professor Henry Fairfield Osborn.

Treasurer—Charles Lanier.

Director—Dr. Hermon C. Bumpus.

Secretary-Assistant Treasurer—John H. Winser.

*THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.**

THE Rockefeller Institute for Medical Research was founded in 1901, by Mr. John D. Rockefeller, who gave for this purpose the sum of two hundred thousand dollars. The aims of the institute are the promotion of medical research, with especial reference to the prevention and treatment of disease.

It was thought wise by the directors of the institute not, at first, to concentrate the work in any one locality, but to enlist the interest and cooperation of such investigators throughout the country as might be engaged in promising researches or who might enter upon new fields if suitable pecuniary assistance could be afforded them. It was the conviction of the directors that in this way it would be possible not only to stimulate and foster valuable contributions to science, but also to secure important practical suggestions as to the lines along which the institute might most wisely develop.

Among the large number of applications for assistance in carrying on original studies which relate to the cause, prevention and cure of disease, and to the problems upon which new knowledge on these subjects must be based, over twenty have been selected. The directors have secured counsel in these selections from the heads of departments or others in the universities of Harvard, Yale, Johns Hopkins, Pennsylvania, Columbia, New York, Chicago, Michigan, McGill, Wesleyan, California and Western Reserve; and in many of these institutions work has been prosecuted. Two of the Rockefeller fellows have been working in Europe. Some of the workers under these Rockefeller Institute grants, which vary in amount from two hundred to fifteen hundred dollars, have completed and published their investigations; some are still engaged upon them.

It is the purpose of the directors, from time to time, to bring together in the form of volumes of collected reprints, the results of these researches which may be published in various technical journals. An arrangement has been effected by which the institute will assume the publication of the *Journal of Experimental Medicine* which will remain under the editorial supervision of Dr. William H. Welch, professor of pathology in the Johns Hopkins University, and president of the board of directors of the institute.

At the end of the first year of practical

* A statement sent us by the secretary of the institute, Dr. L. Emmett Holt.